

WHAT IS CLAIMED IS:

1. An armature of a rotating electric machine, said armature comprising:

a plurality of first magnetic teeth arranged side by side along a circumferential direction of the rotating electric machine, each of the first magnetic teeth having a yoke portion extending along the circumferential direction and a tooth portion extending from a central part of the yoke portion inward along a radial direction of the rotating electric machine; and

a plurality of second magnetic teeth, each located between the tooth portions of each successive pair of adjacent first magnetic teeth, and each of the second magnetic teeth joining two adjacent first magnetic teeth located on both sides.

2. The armature of the rotating electric machine according to claim 1, wherein each of the first magnetic teeth has a pair of joint portions formed along inner edges of both end surfaces of the yoke portion, the joint portions formed at the facing end surfaces of the yoke portions of each successive pair of adjacent first magnetic teeth together forming a connecting part;

wherein each of the second magnetic teeth extends along the radial direction with a mating part formed at an

outer end surface of each second magnetic tooth; and

wherein the second magnetic teeth are joined to the first magnetic teeth by fitting the connecting parts to the respective mating parts.

3. An armature of a rotating electric machine, said armature comprising:

a plurality of first magnetic teeth arranged side by side along a circumferential direction of the rotating electric machine; and

a plurality of second magnetic teeth joined to the first magnetic teeth;

wherein each of the first magnetic teeth has a yoke portion extending along the circumferential direction, a tooth portion extending from a central part of the yoke portion inward along a radial direction of the rotating electric machine, and a pair of joint portions formed along inner edges of both end surfaces of the yoke portion, the joint portions formed at the facing end surfaces of the yoke portions of each successive pair of adjacent first magnetic teeth together forming a connecting part;

wherein each of the second magnetic teeth extends along the radial direction with a mating part formed at an outer end surface of each second magnetic tooth; and

wherein the second magnetic teeth are joined to the

first magnetic teeth by fitting the connecting parts to the respective mating parts.

4. The armature of the rotating electric machine according to claim 3, wherein one of the groups of the connecting parts and of the mating parts is formed into a groovelike shape while the other is formed into a protruding shape which extends along part of the entire axial length of the first and second magnetic teeth.

5. The armature of the rotating electric machine according to one of claim 1, wherein a projecting portion extending along the circumferential direction is formed at one end of the yoke portion of each first magnetic tooth while a recessed portion is formed at the other end, and wherein the projecting portion of each first magnetic tooth is fitted into the recessed portion of the adjacent first magnetic tooth to prevent radial displacement of the adjacent first magnetic teeth.

6. The armature of the rotating electric machine according to one of claim 1, wherein the successive first magnetic teeth are bendably joined in a chainlike form by flexible joints disposed at both ends of the yoke portion of each first magnetic tooth.

7. The armature of the rotating electric machine according to one of claim 1, wherein coils are individually wound around the tooth portions the first magnetic teeth and around the second magnetic teeth.

8. The armature of the rotating electric machine according to one of claim 1, wherein one of the groups of the first magnetic teeth and of the second magnetic teeth serves as main teeth on which the coils are wound while the other serves as auxiliary teeth on which no coils are wound.

9. The armature of the rotating electric machine according to claim 3, wherein each pair of adjacent joint portions forming the connecting part has a protruding shape sticking out in an extending direction of the tooth portion while the mating part has a dovetail groovelike shape.

10. The armature of the rotating electric machine according to claim 9, wherein the end surfaces of the yoke portions of each successive pair of adjacent first magnetic teeth are placed in mutual contact and a space is created between the adjacent protruding joint portions.

11. The armature of the rotating electric machine

according to claim 10, wherein there is formed a pair of cutouts in the opposite surfaces of the yoke portion of each first magnetic tooth, and the cutouts formed in each successive pair of adjacent first magnetic teeth together form a groovelike channel in which an outer fixing end of each second magnetic tooth where the mating part is formed is inserted.

12. The armature of the rotating electric machine according to claim 10, wherein there is provided a joint portion positioner at the bottom of the dovetail groove-shaped mating part formed in each second magnetic tooth for pushing the joint portions fitted therein against inner side walls of the dovetail groove-shaped mating part, the joint portion positioner being formed of one of a protruding raillike member and a rod member.

13. The armature of the rotating electric machine according to claim 12, wherein an inner end surface of each second magnetic tooth opposite to an outer end surface thereof in which the mating part is formed is recessed from an inner end surface of the tooth portions of the adjacent first magnetic teeth by a specific amount.

14. The armature of a rotating electric machine

according to claim 3, wherein a groove is formed in one end surface of the yoke portion of each first magnetic tooth and a protrusion is formed on the opposite end surface of the yoke portion, and wherein the protrusion formed on the yoke portion of each first magnetic tooth is fitted in the groove formed in the yoke portion of the adjacent first magnetic teeth.